

CLAIMS

What is claimed is:

1. A data transmission system comprising the steps of:
transmitting data via a plurality of non-multiplexed channels, each
comprising an IP-encoded, modulated RF signal, wherein
one of the channels contains programming for distribution a
plurality of subscribers, and the remaining said channels
each contain data having an associated IP address of a
specific device;
receiving the channels at a subscriber site;
demodulating, into demodulated signals, a first one of the channels
containing said programming, and a second one of the
channels;
multiplexing the demodulated signals onto a local network; and
delivering the demodulated signals from the local network to at
least one said specific device connected thereto.
2. The data transmission system of claim 1, wherein the first one of
the channels comprises a multicast-encoded signal, and the second one of the
channels comprises a unicast signal.
3. The data transmission system of claim 2, wherein the subscriber
site performs the additional steps of:
joining a multicast transmission; and

demodulating a first one of the channels containing said

programming only if the subscriber site has joined the

multicast transmission.

4. The data transmission system of claim 2, wherein the unicast signal comprises an Internet transmission.

5. The data transmission system of claim 2, wherein the multicast signal comprises a television signal.

6. The data transmission system of claim 2, wherein one of the demodulated signals is delivered to a display device and the other of the demodulated signals is delivered to a separate device.

7. The data transmission system of claim 1, wherein the demodulating step provides two digital signals and each of the digital signals has an IP address matching that of a specific said device connected to the local network.

8. The data transmission system of claim 1, wherein the first one of the channels comprises a broadcast signal, and the second one of the channels comprises a unicast signal.

9. The data transmission system of claim 1, wherein the channels are transmitted from a hub to the subscriber site, and wherein the system comprises the step of transmitting a programming request signal from the subscriber site to the hub indicative of a request for sending specific programming from the hub to the subscriber site via one of the channels.

10. The data transmission system of claim 9, comprising the step of transmitting said specific programming to the subscriber site in response to receiving said programming request signal.

11. The data transmission system of claim 1, wherein the subscriber site comprises a storage device for storing said programming and playing back the programming at a subsequent time.

12. A system for transmitting data from a hub to a plurality of subscriber sites comprising:

- encoding equipment for encoding and encapsulation of data in IP format, coupled to a source of programming content;
- a data source;
- a transmitter, operatively coupled to said encoding equipment and to said data source, for transmitting a plurality of non-multiplexed RF channels comprising said data in IP format and at least one RF channel comprising said programming content in IP format; and
- a subscriber unit, located at each one of the sites, comprising:
 - a receiver for receiving the RF channels from the transmitter;
 - a local network, coupled to at least one subscriber device;
 - and
 - a dual channel demodulator, coupled to the receiver, that demodulates the RF channels and multiplexes two

resultant digital signals onto the local network,
wherein one of the digital signals has a same IP
address as a specific said subscriber device connected
to the local network, and wherein the other of the
digital signals contains said programming content.

13. The system of claim 12, wherein each of the subscriber sites
comprises:

an upstream transmitter for transmitting a signal to the hub
indicative of a request for sending specific programming
from the hub to the subscriber site via one of the channels;
and
a subscriber site device for initiating transmission of said request;
wherein said hub comprises:
an upstream receiver for receiving said request from the
upstream transmitter; and
a return channel server for processing said request.

14. The system of claim 12, wherein said data source comprises an
Internet connection.

15. The system of claim 12, further comprising a storage device for
storing said programming content and playing back the programming content at a
subsequent time.

16. The system of claim 12, wherein said subscriber device
comprises a personal computer.

17. The system of claim 12, comprising a first and a second said subscriber device, wherein the first said subscriber device comprises a set-top box connected to a television set and the second said subscriber device comprises a personal computer.

18. A system for transmitting data from a hub to a plurality of sites comprising:

encoding equipment for encoding and encapsulation of data in IP

format, coupled to a source of programming content;

a first router coupled to said encoding equipment;

a second router coupled to a source of Internet data;

a transmitter for transmitting a plurality of channels comprising

said Internet transmissions in IP format and at least one

channel comprising said programming content in IP format;

and

a switch for transferring data from said first router and said second

router to said transmitter.

19. The system of claim 18, comprising a return channel server that sends specific said programming content to one of the sites in response to a request therefrom.

20. A data transmission system comprising the steps of:

transmitting information via at least two component signals

wherein each of the component signals contains an IP

address, wherein at least two different types of service are carried by the component signals;
receiving the component signals;
demodulating the component signals into two digital signals carrying said two different types of service;
multiplexing the digital signals onto a local network; and
delivering each of the digital signals from the network to a respective device having the IP address matching that contained in one of the component signals.

21. The data transmission system of claim 20, wherein the first one of the component signals comprises multicast transmission, and the second one of the component signals comprises unicast signal.

22. The data transmission system of claim 21, comprising the additional steps of:

receiving the component signals at a subscriber site; and
demodulating a first one of the component signals only if the subscriber site has joined the multicast transmission.

23. The data transmission system of claim 21, wherein the unicast signal comprises an Internet transmission.

24. The data transmission system of claim 21, wherein the multicast transmission comprises a television signal.

25. The data transmission system of claim 20, wherein:

the component signals are transmitted from a hub to a subscriber site; and

the system comprises the step of transmitting a programming request signal from the subscriber site to the hub indicative of a request for sending specific programming from the hub to the subscriber site via one of the component signals.

26. The data transmission system of claim 25, comprising the step of transmitting said specific programming to the subscriber site in response to receiving said programming request signal.

27. The data transmission system of claim 26, wherein the subscriber site comprises a storage device for storing said programming and playing back the programming at a subsequent time.

28. The data transmission system of claim 20, wherein each of the component signals is transmitted using a coded modulation technique.

29. The data transmission system of claim 20, wherein the transmitting step comprises transmitting the component signals using a coded modulation technique, and wherein the demodulating step comprises decoding the component signals into said two digital signals.

30. The data transmission system of claim 29, wherein the coded modulation technique comprises code-division multiple access.

31. The data transmission system of claim 20, wherein each of the component signals is transmitted using a digital modulation technique.